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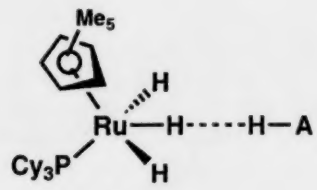


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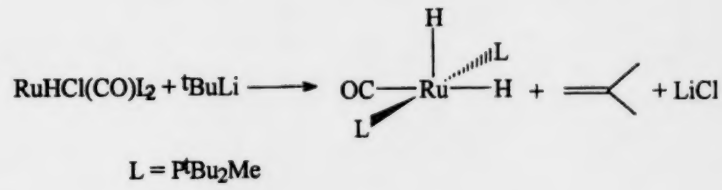


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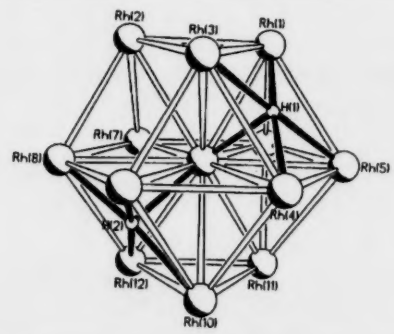


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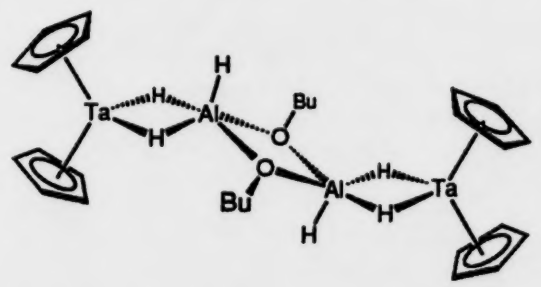


Elsevier Science S.A.

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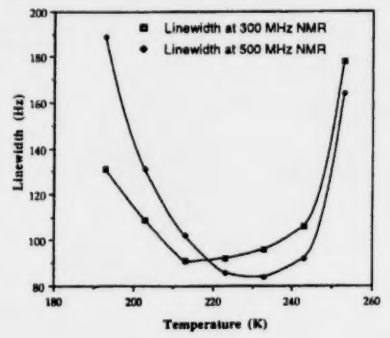
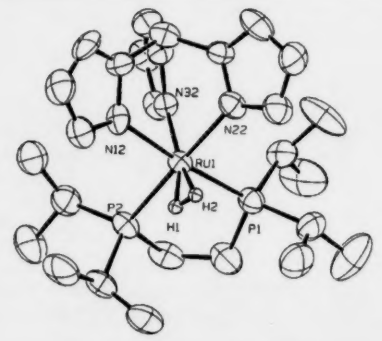
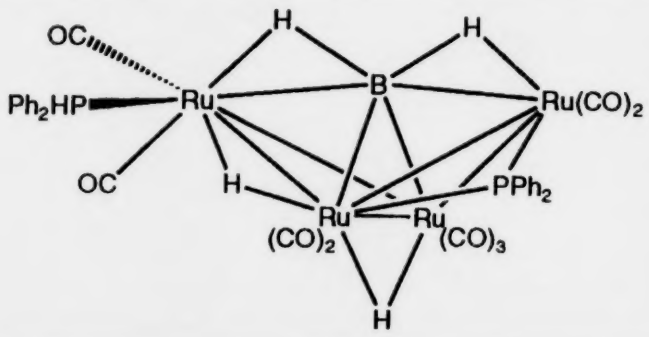
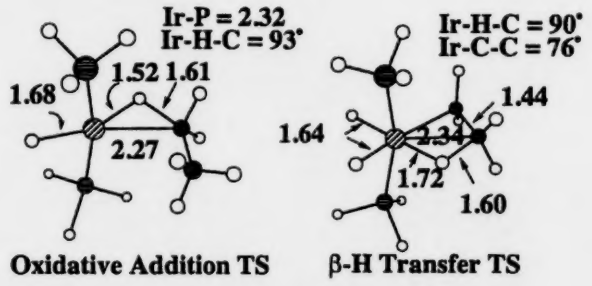
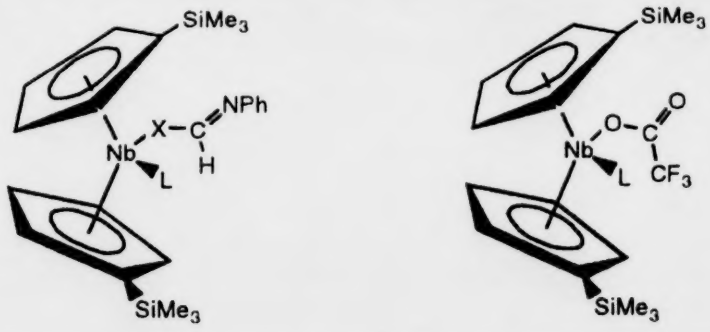
| $T_1$, exchange and anomalous broadening in metal dihydrogen complexes ..... W. Yao, J.W. Faller, R.H. Crabtree | 71 |  |
| Hydride, dihydrogen, dinitrogen and related complexes of ruthenium containing the ligand hydrotris(pyrazolyl)borate. X-ray crystal structure of $[\{HB(pz)_3\}Ru(\eta^2\text{-}H_2)(dippe)][BPh_4]$ (dippe = 1,2-bis(diisopropylphosphino)ethane)..... M. Jiménez Tenorio, M.A. Jiménez Tenorio, M.C. Puerta, P. Valerga | 77 |  |
| Preparation and characterization of $[HRu_4(CO)_{12-x}(PHPh_2)_xBH_2]$ ($x$ = 1–3) and the oxidative addition of a P–H bond in $[HRu_4(CO)_{10}(PHPh_2)_2BH_2]$ ..... C.E. Housecroft, J.S. Humphrey, A.L. Rheingold | 85 |  |
| Transition metal-catalyzed alkane dehydrogenation ..... M.T. Benson, T.R. Cundari | 91 |  |
| Insertion reactions of heterocumulenes into the niobium–hydride bond of isocyanide and carbonyl niobocene complexes ..... A. Antiñolo, F. Carrillo-Hermosilla, S. Garcia-Yuste, M. Freitas, A. Otero, S. Prashar, E. Villaseñor, M. Fajardo | 101 |  |

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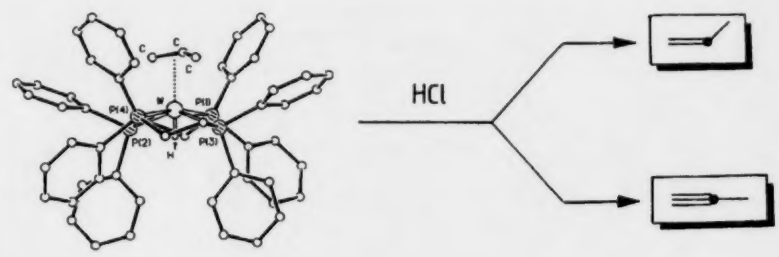


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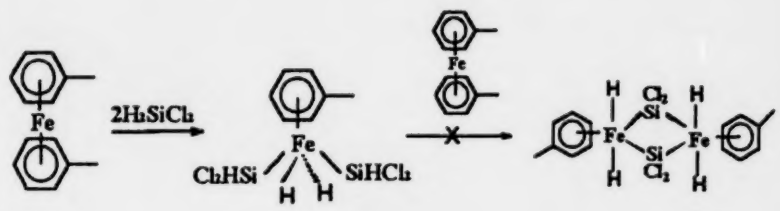


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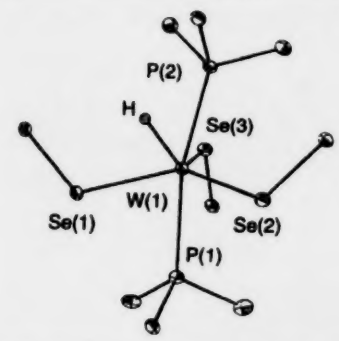


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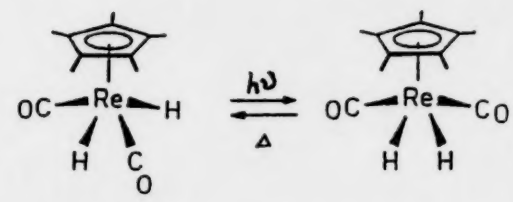


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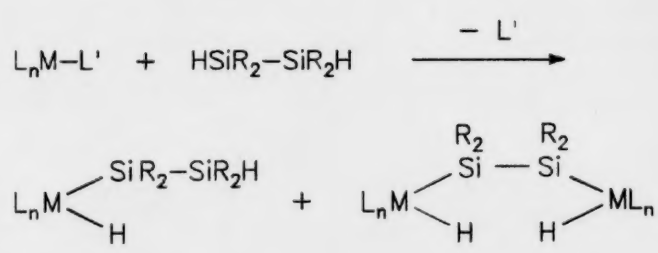


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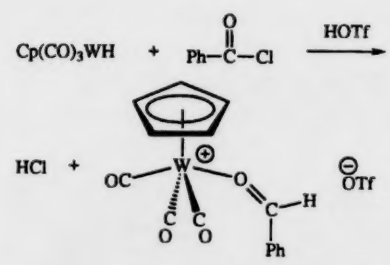

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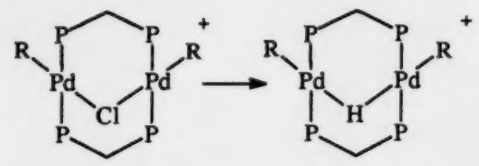
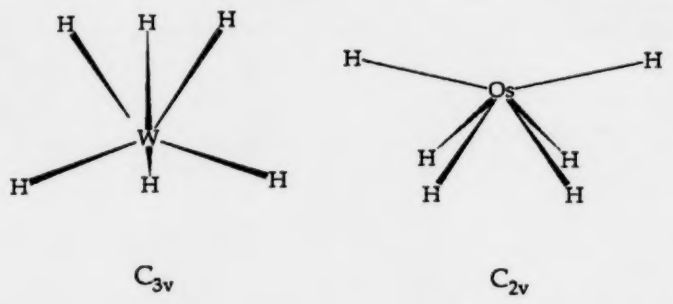
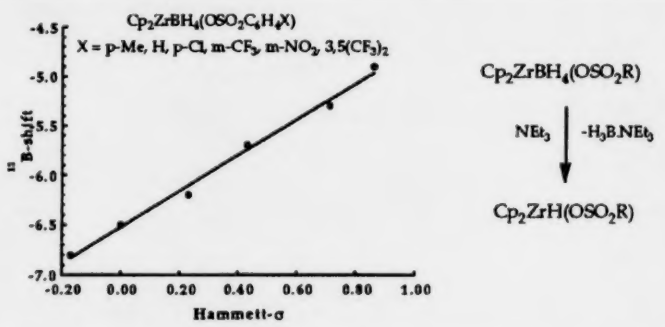
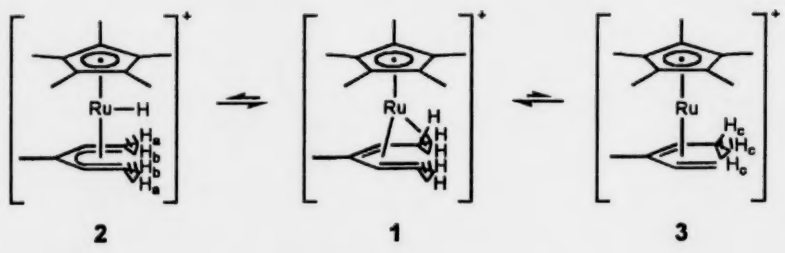
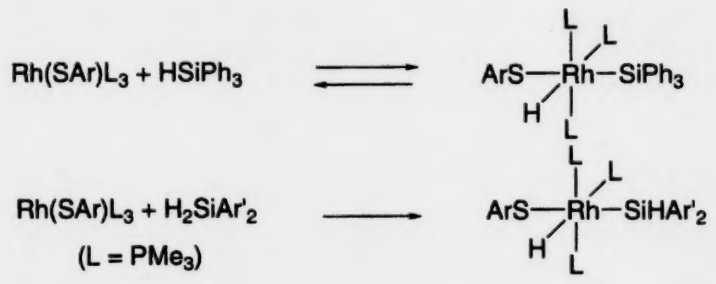
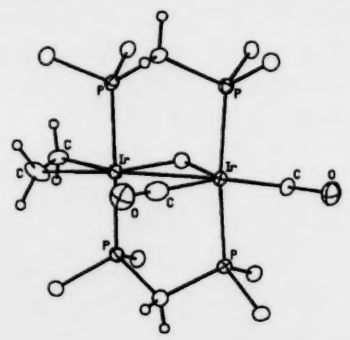
| Hydride-bridged dipalladium complexes containing diphosphine ligands ..... 173<br>R.A. Stockland, Jr., G.K. Anderson, N.P. Rath |  |
| Pseudo second-order Jahn-Teller effects and symmetry considerations in transition metal polyhydride complexes ..... 179<br>C.A. Bayse, M.B. Hall |  |
| Zirconocene hydrides with coordinated sulfonates..... 185<br>N.S. Hüsgen, G.A. Luinstra |  |
| Protonation of $[Ru(C_5Me_5)(3\text{-}C_6H_9)]$ ($C_6H_9$ = methylpentadienyl): fluctionality and structure of an agostic complex ..... 197<br>W. Trakarnpruk, I. Hyla-Kryspin, A.M. Arif, R. Gleiter, R.D. Ernst |  |
| Preparation and structures of hydrido(organosilyl)arenethiolatorhodium(III) complexes with $PMe_3$ ligands. Irreversible and reversible oxidative addition of an Si–H bond to thiolatorhodium(I) complexes ..... 203<br>K. Osakada, K. Hataya, T. Yamamoto |  |
| Alkyne or alkene binding versus hydrogenation in reactions with $[Ir_2H(CO)_2(\mu\text{-}H)_2(Ph_2PCH_2PPh_2)_2][BF_4]$. Structure of $[Ir_2(C_2H_4)(CO)_2(\mu\text{-}H)(Ph_2PCH_2PPh_2)_2][BF_4]$ ..... 213<br>F.H. Antwi-Nsiah, J.R. Torkelson, M. Cowie |  |

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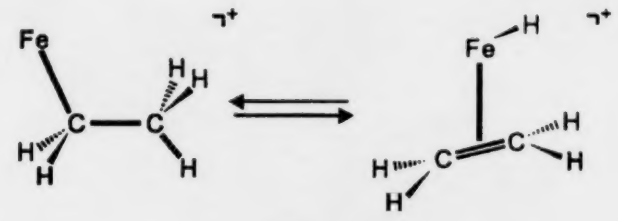


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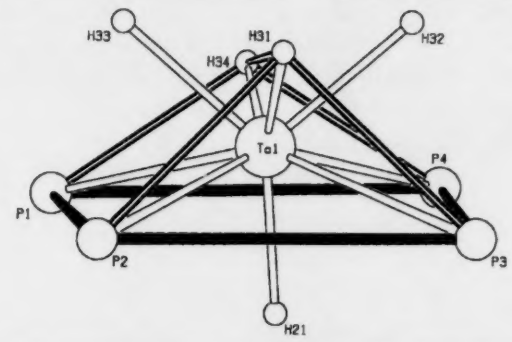


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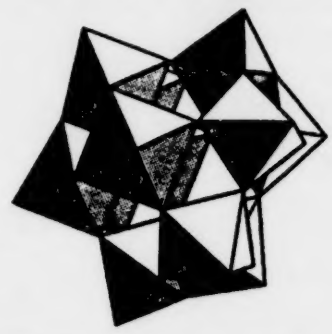

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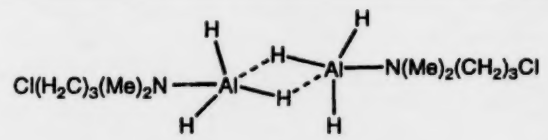


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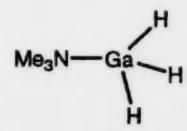


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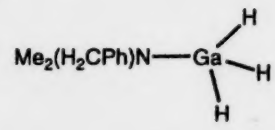


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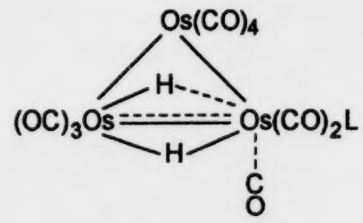


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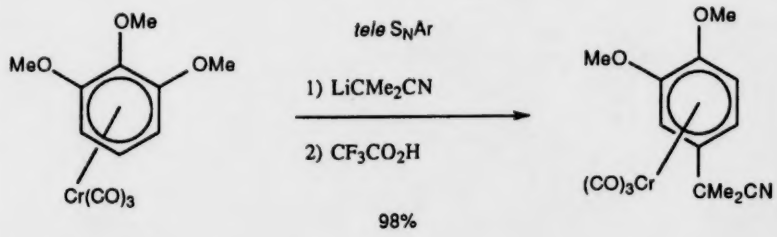

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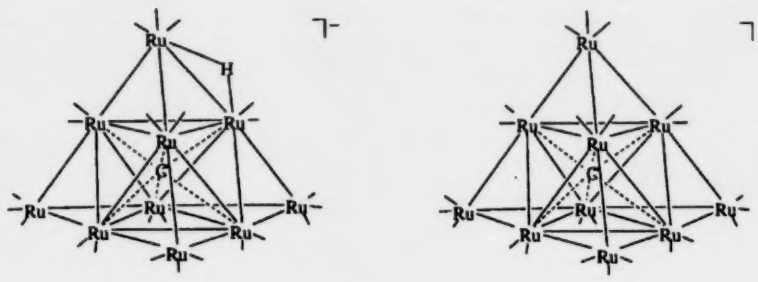
Ru
H
C
Ru
Ru
Ru

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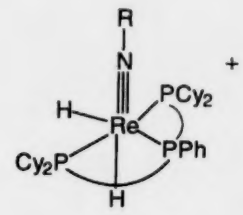
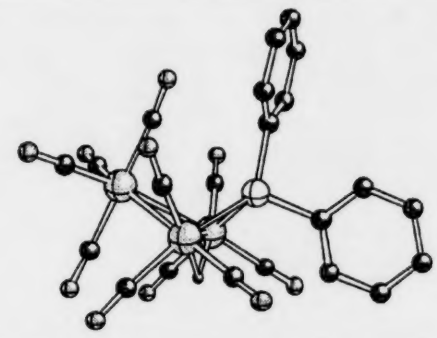
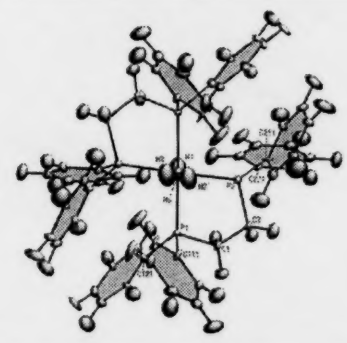
| Synthesis, structure and reactivity of $[ReH_2(NR)(Cyttp)]^+$ ($Cyttp = PhP(CH_2CH_2CH_2PCy_2)_2$) complexes. Organoimido analogues of the oxo complex that transfers the elements of water to substrates ..... 339<br>M.W. Baize, J.C. Gallucci, A. Wojcicki |  + <br>**2** R = $C_6H_4CH_3$-*p*<br>**3** R = $C_6H_5$<br>**4** R = $C_6H_{11}$ |
| The crystal, molecular and electronic structure of $[Os_3(\mu\text{-}H)(CO)_{10}(\mu\text{-}PPh_2)]$ ..... 345<br>B.F.G. Johnson, J. Lewis, E. Nordlander, P.R. Raithby, C.E. Housecroft |  |
| Single-crystal X-ray and neutron diffraction structure determination and inelastic neutron scattering study of the dihydrogen complex *trans*-$[Ru(H_2)(H)(dppe)_2][BPh_4]$ ..... 351<br>A. Albinati, W.T. Klooster, T.F. Koetzle, J.B. Fortin, J.S. Ricci, J. Eckert, T.P. Fong, A.J. Lough, R.H. Morris, A.P. Golombek |  |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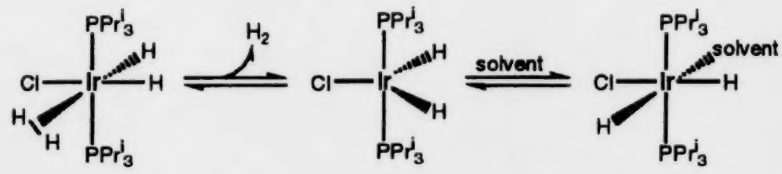
| Influence of arene and alkane coordination on reversible hydrogen elimination from $IrXH_2(H_2)(PPr^i_3)_2$ (X = Cl, Br, I) ..... 359<br>D.W. Lee, C.M. Jensen |  |

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